

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY

MINUTES OF MARCH 17, 1959

President Shoumatoff called the meeting to order at 8:15 PM in Room 419 of the American Museum of Natural History. There were 15 members and 12 guests present. Dr. A. B. Klots reported that the Botanical Garden is being consulted regarding a field trip to be held there. Mrs. P. Vaurie submitted a membership proposal for Dr. H. Ruckes of Dr. Nicholas Kormilev, 367 Lincoln Place, Brooklyn, New York. Mr. Shoumatoff introduced Mr. Ted Weinreich, President of the Junior Society, who briefly discussed the development of the Junior's program. Mr. Heineman suggested that visitors add their addresses after their names in the attendance book so they can be placed on the mailing list.

Mr. Shoumatoff introduced the speaker of the evening, Mr. Bernard Heineman, who spoke on "Insects of Jamaica." His talk, which dealt with the history and the insects of the island, was illustrated with many beautiful colored slides. (An abstract follows the minutes.)

The meeting was adjourned at 10:00 PM.

PETER DIX, *Secretary, pro tem.*

INSECTS OF JAMAICA

Abstract

This talk is more or less a summary of thirteen visits to the Island of Jamaica which is 1600 air miles from New York City and 5½ hours flying time. Its area is roughly 4200 square miles, about 2½ times the size of Long Island. Many upheavals and disturbances have occurred in its geological history. Unlike Bermuda, Nassau and other islands of low altitude, Jamaica has, in addition to beautiful beaches, rolling savannahs, undulating hills, mountain ranges which rise majestically to heights of 7400 feet. The flora is exquisite. There are no venomous snakes, but ants, sand flies, mosquitoes, chiggers, and ticks abound in some areas—and they all bite. When Columbus discovered Jamaica on May 3rd, 1499, it was occupied by a tribe of peaceful Indians called the Arawaks. Their chief claim to fame is that a modern hotel now has been named for them. The Arawaks called the place Xaymaca—"Island of Springs."

By the early 16th century the Spanish had settled the island. They also settled the Arawaks, enslaving and killing them until only the few who escaped to the mountains survived. Slaves were imported by the Spaniards, and, when in 1655 the British captured the island, they, too, brought in negroes from the African Ashanti tribe. When any of these vassals managed to escape, they retreated to secluded spots in the mountainous interior and comingling with the Indians became a marauding group known as the Maroons. Their raids on the colonists became so great that in 1738 Edward Trelawny, the British Governor, signed a treaty giving them tax-free land in the interior and permitting them to elect their own leader with the rank of Colonel.

The average temperature at sea level is 79 degrees with a variance of 5 degrees between that of summer and winter; hot days and cool nights. When it's 80 degrees in the port of Kingston, the capital, it is about 56 degrees on Blue Mountain Peak. Half of Jamaica is over 1000 ft. above sea level. May-June and September-October are generally the wettest months; February, March, April the driest. Butterflies are seen somewhere every day, but the best collecting months are July, August, and November to April after the heavy rains. The natives call butterflies "bots" (bats). Ordinary bats are called "rot bots" (rat bats). I am known as "the bot mon."

Sir Hans Sloane was the first naturalist to write at length on the flora and fauna of Jamaica. His account of his fifteen months' sojourn in 1687 and 1688 is a classic. Since then there have been many famous collectors in Jamaica; the list includes Cramer, Gosse, Gundlach, Kaye, Lily Perkins, Avinoff and Shoumatoff, Watson and Bell. There are about 130 described species on the Island, and 38 of these are indigenous. There are several sight records. Lily Perkins claims to have seen the orange tip of an *Authocheris* type; Avinoff and Shoumatoff describe a Pierid or Ithomid from Lowe River; C. B. Lewis mentions a new *Papilio* from the Blue Mts.; Avinoff and Shoumatoff missed one that they would have named Arawak; and only recently an English collector claims to have seen a *Morpho* at Port Antonio. There is still romance in Jamaica and new fields to conquer. Further collecting should disclose new species in the unexplored mountain regions and the less frequented parishes.

BERNARD HEINEMAN

MEETING OF APRIL 7, 1959

The President called the meeting to order at 8:10 PM in Room 419 of the American Museum of Natural History; 17 members and 5 guests were present. Mr. Shoumatoff stated that the JOURNAL is progressing well. The volume containing the last two quarters of 1958 has been distributed and material for the 1959 volume is ready for the printer. Dr. Nicholas Kormilev was elected to membership. The Junior Society announced they are going to visit the laboratories at Fordham University under the supervision of Dr. Forbes on April 25th and on May 9th Mr. James Sanford is going to speak to them. Dr. John Schmitt reported on the meeting of the Philadelphia Entomological Society held at the Academy of Natural Sciences on March 25th. He felt that it was a successful meeting. However, one item of concern to entomologists is the problem of attracting young people to entomology. The group was glad to hear about the Junior Society which is sponsored by our senior members. Dr. Schmitt expressed his thanks for being able to represent the New York Society at this meeting.

Several recent articles from popular publications were brought to the attention of the Society: a picture story from last Sunday's NEW YORK TIMES on the 90th birthday of the American Museum of Natural History; a picture story of unusual photographers, including our own Dr. Vishniac in the SATURDAY EVENING POST; and a write-up of Dr. Vishniac in the February, 1959 issue of MODERN PHOTOGRAPHY.

Mr. Shoumatoff then introduced Dr. Lucy Clausen, the speaker of the evening, who spoke on "Medicinals of Insect Origin." She displayed several medicinally important insects and examples of pharmaceutical substances derived from insects. Dr. Clausen answered many questions after her interesting talk. (An abstract follows the minutes.)

The meeting adjourned at 10:00 PM.

PETER DIX, *Secretary, pro tem.*

MEDICINALS OF INSECT ORIGIN

Abstract

When a person talks about insects and their relation to medicine, thoughts of insect-caused epidemics are evoked. Less well-known, however, is the reverse situation wherein insects or their products of metabolism serve to alleviate disease conditions. In the introductory remarks the various areas of study basic to the standard acceptance of medicinals of insect origin were explained. Insect substances that are officially recognized as medicinals were divided into nine categories. Each category was defined, an example cited, a standard method of preparation and assay described and the recommendations for use given.

Among the items discussed were: beeswax as a vehicle for penicillin designed for intramuscular injection; honey as a flavoring agent or as a disguise for the disinfectant incorporated in gargles; cochineal as a coloring agent for pink dental preparations; non-absorbable sutures originating from the silk worm, and lac as a coating for tablets calculated to disintegrate within the body at controlled intervals. Although those products that are officially recognized were emphasized, many remedies still used routinely among various cultural groups were mentioned.

L. W. CLAUSEN

MEETING OF APRIL 21, 1959

The meeting was called to order at 8:05 PM by Vice-president Heineman in Room 419 of the American Museum of Natural History. He welcomed the 14 members and 10 guests who were present. Mr. Shoumatoff, our President, is out of town at this time. The minutes of the March 3rd, March 17th, and April 7th meetings were read and approved. It was announced that Dr. Roman Vishniac won a Grand Prize at the photographic show recently held at the New York Coliseum. Dr. and Mrs. Richard Brickner were introduced.

Mr. Heineman introduced the speaker, Dr. T. C. Schneirla, who spoke on "Problems in the Psychology of Insects and Mammals." His talk was illustrated with slides. A lively discussion period followed.

The meeting adjourned at 10:00 PM.

ROBERT G. BLOCH, *Secretary*

MEETING OF MAY 5, 1959

President Shoumatoff called the meeting to order at 8:10 PM in Room 419 of the American Museum of Natural History. The 20 members and

nine guests present were greeted by the President. Dr. J. Schmitt introduced Miss Jean Adams, Mr. Louis Varvory, Mr. Richard Guest, Dr. Granett, and Dr. N. Lau, his guests, who are students and faculty members of Rutgers University. Mr. Heineman stated that the next meeting would be a member's symposium and asked everyone to participate. He, also, asked for suggestions for the coming year. Mr. Soraci, the Editor, said he had enough manuscript material for the fourth issue of this year and some for 1960. Dr. A. Klots announced a field trip to be held on Sunday, May 31st at the National Audubon Center at Greenwich, Conn. Mr. H. Schwarz proposed Mrs. Elsie B. Klots for membership. The By-laws were suspended and she was elected to membership. Mr. David Lohre was proposed by Mr. J. Huberman. An Executive Committee meeting has been called for Monday, May 25, at 6 PM. It was announced that Mr. James Sanford will speak to the Junior Society on May 9th and Dr. J. Schmitt on May 23rd; the Juniors will join with us on our field trip.

The President introduced Dr. E. S. Hodgson, Assistant Professor of Zoology at Columbia University and former Society Secretary, who spoke on "Hormones and Insect Behavior." Movies and slides were used by the speaker to illustrate his talk. A discussion period followed the talk. (An abstract follows the minutes.)

Meeting adjourned at 9:45 PM.

ROBERT G. BLOCH, *Secretary*

HORMONES AND BEHAVIOR IN INSECTS

Abstract

Insect hormones are known to influence growth and development. Recently it has been shown that hormones produced by the neurons in a part of the brain have an effect upon behavior. In order to analyze the mechanisms of these behavioral effects, the hormones were applied to central nervous systems removed from the body and to whole intact insects.

Corpora cardiaca, glands supplied with hormone from cells in the pars intercerebralis of the roach, contain at least three hormones. One hormone is produced by the glands themselves, the other two are derived entirely from the pars intercerebralis. It is the latter type of hormone, termed a neurosecretory hormone, with which this work is concerned. Exposure of central nerve cords to corpus cardiacum extracts *in vitro* results in a pronounced decrease of the spontaneous nerve activity within the nerve cords. When injected into whole intact roaches (*Periplaneta* or *Blaberus*) the extracts induce a more stereotyped behavior pattern than found in the controls. The hypothesis is advanced that secretions passing from the brain to the corpora cardiaca and thence into the hemolymph play a role in determining the overall level of activity in the central nervous system and in the entire animal.

EDWARD S. HODGSON

MEETING OF MAY 19, 1959

Member's symposium—informal reports by members. Minutes not available for this meeting.